

APPLICATION NO: 09/747,640

DOCKET NO. FA0946 US NA

Claim ~~16~~⁶. The adhesive of claim ~~11~~¹, wherein the amorphous and liquid polyesters are prepared by reacting aliphatic, cycloaliphatic or aromatic dicarboxylic acids and the derivatives thereof, with diols.

AI Claim ~~17~~¹⁷. The adhesive of claim ~~11~~¹, wherein component B is selected from the group consisting of aliphatic, cycloaliphatic, araliphatic, and aromatic diamines; derivatives of dicyclohexyl methane diamine; amino-functional polypropylene glycols; glycerin; trimethylolpropane; hexanediol-1,6; decanediol-1,10; polyether alcohols; polyester alcohols; ricinoleic oil; and polyols based on hydrated dimeric fatty acids.

Claim ~~18~~⁸. The adhesive of claim ~~11~~¹, wherein the equivalent weight ratio of isocyanate to amine in the adhesive composition is from 1:1 to 1:5.

Claim ~~19~~⁹. The adhesive of claim ~~11~~¹, wherein the equivalent ratio of diol to diisocyanate is from 1:1 to 1:3.

REMARKS

In the present Amendment, Applicants have deleted claims 1-10 and have added claims 11-19, so that claims 11-19 are pending. No new matter has been added.

Rejection of the Claims under 35 U.S.C. § 103(a)

Original claims 1-10 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,077,339 to Grogler in view of U.S. Patent No. 4,647,646 to Hardy. The Examiner asserts that it would have been obvious to a person of ordinary skill in the art to produce Applicants' unique hot melt adhesive by combining the thermally curable PUR-powder composition disclosed in Grogler with the blocking agent taught by Hardy.

Applicants respectfully submit, however, that Grogler and Hardy in combination do not teach or suggest a hot melt adhesive having Applicants' unique mixture of semi-crystalline and liquid amorphous polyesters. On the contrary, Grogler simply teaches at column 5 lines 45-46 that mixtures of the polyhydroxyl compounds set forth in column 5 lines 15-23 may be utilized to form the polyester components of

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Grogler's PUR-powder composition (also see Examples 1 and 4 of Grogler).

Nowhere, however, does Grogler teach or suggest that the polyesters it discloses as being "suitable" for forming a PUR-powder composition can be mixed together to form an adhesive having the advantages of the unique hot melt adhesive disclosed by Applicants.

More specifically, the unique combination of polyesters in Applicants' hot melt adhesive advantageously enables substrates to be pre-coated with the adhesive and stored until such time in the future as adhesion of the substrates is desired. On that future date in time, the pre-coated substrates are positioned and the adhesive coating is melted by heating. Once the adhesive cools, the substrates are securely adhered and the adhesive can no longer be melted. In contrast, the prior art polyurethane adhesives do not have long storage times because they have an increased sensitivity to water and humidity which causes premature curing and adhesion failure.

Applicants' unique mixture of polyesters, however, produces a hot melt adhesive that is resistant to water and humidity enabling the precoated substrates to be stored for months before actually being pasted without the hot melt adhesive prematurely curing via a premature crosslinking reaction with water as in the prior art.

Furthermore, when the prior art polyurethane adhesives do react with water, carbon dioxide is released from the adhesive thereby causing the prior art adhesives to foam. This foaming in turn causes the substrates that are being adhered to change position or partially separate during pasting. Applicants' hot melt adhesive, however, is resistant to water and humidity, and therefore does not foam. As a result, the substrates being pasted do not change position during pasting and are therefore able to avoid faulty or defective pastings.

In sum, the innovative mixture of polyesters used by Applicants to form their unique hot melt adhesive is neither taught nor suggested by Grogler or Hardy alone or in combination. As a result, Applicants' hot melt adhesive is not rendered obvious by Grogler in view of Hardy.

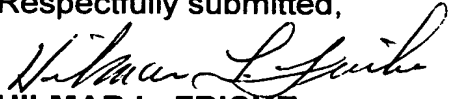
Summary

All of the objections and rejections have been properly traversed, accommodated, or rendered moot and a full and complete response has been made to the outstanding Office Action. Accordingly, Applicants submit that this application is in condition for allowance and solicit a Notice of Allowance. In order to expedite disposition of this case, the Examiner is invited to contact Applicant's representative at the telephone number below to resolve any remaining issues.

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There should be no fee due in connection with the filing of this Response.
However, should a fee be due which is not accounted for, please charge such fee to
Deposit Account No. 04-1928 (E.I. du Pont de Nemours and Company).

Respectfully submitted,


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